

REMARKS/ARGUMENTS

Claims 1-24 are pending in the present application. Claims 1, 8, 9, 16, 17, and 24 are amended. Support for the amendments to independent claims 1, 9, and 17 may be found in the Specification on at least page 16, lines 12-17, page 24, lines 22-30, page 25, lines 21-26, and Figure 8, elements 800, 802, 816, and 818. Support for the amendments to dependent claims 8, 16, and 24 may be found in the Specification on at least page 26, lines 19-27, page 27, lines 9-11, page 31, line 14 – page 32, line 6, and Figure 11, step 1122. As a result, no new matter is added by any of these amendments to the claims. Reconsideration of the claims is respectfully requested.

I. Telephonic Interview with Examiner Osman on November 27, 2007

Applicants thank Examiner Ramy Osman for the courtesy extended to Applicants' representative during the November 27, 2007 telephonic interview. During the teleconference, the Examiner and Applicants' representative discussed proposed independent claim amendments to further distinguish the present invention from the cited prior art reference. Examiner Osman appeared to indicate that the amended independent claim language contained in this Response to Office Action would overcome the cited prior art reference. Therefore, it is Applicants' representative's understanding that barring additional materially relevant prior art being found in an updated search, the present claims are now in condition for allowance. The substance of the interview, as well as additional reasons that the claims are not anticipated, is summarized in the remarks of Section III, which follows below.

II. 35 U.S.C. § 112, Second Paragraph, Claims 8, 16, and 24

The Examiner rejects claims 8, 16, and 24 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which Applicants regard as the invention. This rejection is respectfully traversed.

In rejecting the claims, the Examiner states:

The wording of the claims make it is unclear whether the "Force Out data element" is part of the received packet, or if it is independent of the packet wherein the channel adapter receives two separate pieces of data (one being the packet and the other being the "Force Out data element").

Office Action dated September 10, 2007, page 2.

In response, claims 8, 16, and 24 are amended to clarify that the force out bit associated with the received packet is within a work queue element and not within the received packet, itself. Therefore the rejection of claims 8, 16, and 24 under 35 U.S.C. § 112, second paragraph has been overcome.

III. 35 U.S.C. § 102, Anticipation, Claims 1-24

The Examiner rejects claims 1-24 under 35 U.S.C. § 102 as being anticipated by *Kashyap et al.*, U.S. Patent No. 7,116,673 ("Kashyap"). This rejection is respectfully traversed.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). Anticipation focuses on whether a claim reads on the product or process a prior art reference discloses, not on what the reference broadly teaches. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983). In this case, each and every feature of the presently claimed invention is not identically shown in the cited reference as arranged in the claims.

Amended independent claim 1 of the present invention, which is representative of amended independent claims 9 and 17, reads as follows:

1. A method in a logically partitioned data processing system, the method comprising:
 - receiving a packet in a host channel adapter for a system area network, wherein the host channel adapter is shared among a plurality of logical partitions within the logically partitioned data processing system, and wherein each logical partition within the plurality of logical partitions includes a logical host channel adapter having a logical port;
 - checking a multicast table in the host channel adapter to determine if a matching entry exists, wherein the multicast table contains information on multicast groups to which logical ports of logical host channel adapters belong; and
 - forwarding the packet to trusted software in response to a determination that the packet is intended for multicasting and that no matching entry exists in the multicast table, wherein the trusted software forwards the packet to one or more appropriate recipient logical partitions within the plurality of logical partitions.

With regard to claim 1, the Examiner states:

In reference to claims 1 and 11, Kashyap teaches a method in a logically partitioned data processing system, the method comprising:

- receiving a packet in a host channel adapter for a system area network (column 5 lines 27-50 & column 8 lines 35-50);
- checking a multicast table in the host channel adapter to determine if a matching entry exists (column 12 lines 1-15); and
- forwarding the packet to trusted software in response to a determination that the packet is intended for multicasting and that no matching entry exists in the multicast table (column 12 lines 1-15),
 - wherein the trusted software forwards the packet to appropriate recipient logical partitions (column 7 line 47 - column 8 line 5).

Office Action dated September 10, 2007, page 3, item 7.

Kashyap teaches a method for “determining parameters needed to communicate with a remote node in a computer network.” Kashyap, column 1, lines 57-59. The “distributed computing system” includes “end nodes, switches, routers, and links interconnecting these components. Each end node uses send and receive queue pairs to transmit and receive messages.” Kashyap, column 2, lines 41-44.

However, as amended, claim 1 recites a “method in a logically partitioned data processing system...wherein the host channel adapter is shared among a plurality of logical partitions within the logically partitioned data processing system.” Even though Kashyap may make reference to “partitions,” these partitions as taught by the method of Kashyap only refer to “one or more possibly overlapping sets” of an endnode’s ports. Kashyap, column 8, lines 2-4. Kashyap teaches that a “host channel adapter is implemented in hardware” and that a “[s]ubnet manager configures channel adapters with the local addresses for each physical port, i.e., the port’s LID.” Kashyap, column 4, lines 14-15 and column 5, lines 35-36, respectively. Kashyap neither makes reference to a plurality of logical partitions within a logically partitioned data processing system nor to a channel adapter being shared by the plurality of logical partitions. Therefore, Kashyap does not teach these above-recited claim 1 features.

In addition, because Kashyap does not teach a plurality of logical partitions within a logically partitioned data processing system, Kashyap cannot teach that “each logical partition within the plurality of logical partitions includes a logical host channel adapter having a logical port.” Kashyap neither makes reference to a logical host channel adapter nor to a logical port. Since Kashyap does not teach logical host channel adapters and logical ports, Kashyap cannot teach that “the multicast table contains information on multicast groups to which logical ports of logical host channel adapters belong” as further recited in amended claim 1. Furthermore, Kashyap cannot teach that “the packet” is forwarded “to one or more appropriate recipient logical partitions within the plurality of logical partitions” as recited in amended claim 1 because Kashyap does not teach a logically partitioned data processing system.

As a result, Kashyap does not identically teach each and every element recited in amended claim 1 of the present invention. Accordingly, the rejection of independent claims 1, 9, and 17 as being anticipated by Kashyap has been overcome. In view of the arguments above, amended independent claims 1, 9, and 17 are in condition for allowance. Claims 2-8, 10-16, and 18-24 are dependent claims depending on independent claims 1, 9, and 17, respectively. Consequently, claims 2-8, 10-16, and 18-24 also are allowable, at least by virtue of their dependence on allowable claims. Furthermore, these dependent claims also contain additional features not taught by Kashyap.

For example, amended dependent claim 8 of the present invention, which is representative of amended dependent claims 16 and 24, reads as follows:

8. The method of claim 7, wherein in response to the host channel adapter’s receiving the packet and in response to an associated Force Out bit in a work queue

element being set to a first value, the host channel adapter attempts to transmit the packet to local logical host channel adapters, and in response to the channel adapter's receiving the packet and in response to the associated Force Out bit in the work queue element being set to a second value that is distinct from the first value, the host channel adapter transmits the packet over a system area network fabric.

In rejecting the claim, the Examiner states:

In reference to claim 8, Kashyap teaches the method of claim 7, wherein in response to the host channel adapter's receiving the packet with a Force Out data element set to a first value, the host channel adapter attempts to transmit the packet to local logical host channel adapters, and in response to the channel adapter's receiving the packet with the Force Out data element set to a second value that is distinct from the first value, the host channel adapter transmits the packet over a system area network fabric (column 4 line 49 - column 5 line 25).

Office Action dated September 10, 2007, page 4, item 14.

Kashyap teaches that work queue elements, which describe data to be transmitted on a network fabric, are processed by hardware in the host channel adapter. Kashyap, column 5, line 65 – column 6, line 7. However, Kashyap does not teach that work queue elements include force out bits associated with received packets. In contrast, amended claim 8 recites, “in response to the host channel adapter's receiving the packet and in response to an associated Force Out bit in a work queue element being set to a first value.”

In addition, as shown above, Kashyap does not teach logical host channel adapters. Consequently, Kashyap cannot teach that “the host channel adapter attempts to transmit the packet to local logical host channel adapters” as further recited in claim 8. Therefore, Kashyap also does not identically teach each and every element recited in amended claims 8, 16, and 24.

Accordingly, the rejection of claims 1-24 under 35 U.S.C. § 102 as being anticipated by Kashyap has been overcome.

IV. Conclusion

It is respectfully urged that the subject application is patentable over the cited prior art reference and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,

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